CAPACITOR DEVICE AND METHOD

Abstract

A method for making, and a dielectric material is provided. A capacitor is provided that includes a lossy dielectric layer that is also not leaky. The lossy behavior dampens unwanted oscillations in power supplies or other electrical systems. A capacitor is further provided is tunable for an amount of lossy behavior over a broad range. A core dopant concentration can be varied, and a doped core grain fraction can be varied to control the extent of a desired lossy property in a capacitor. Dielectric materials having grains with doped shells reduce leakiness. Additionally in selected embodiments, undoped core grains mixed with doped core grains reduce leakiness.

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